

DERWENT-ACC-NO: 1977-86545Y  
DERWENT-WEEK: 197749  
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TITLE: Purification of adipic acid - using nitric acid treatment in presence  
of oxidn. catalyst and active carbon treatment

PATENT-ASSIGNEE: BASF AG[BADI]

PRIORITY-DATA: 1976DE-2624472 (June 1, 1976)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
BE 855237 A	November 30, 1977	N/A	000	N/A
DE 2624472 A	December 15, 1977	N/A	000	N/A
DE 2624472 B	May 23, 1979	N/A	000	N/A
FR 2353513 A	February 3, 1978	N/A	000	N/A
GB 1576297 A	October 8, 1980	N/A	000	N/A
IT 1076043 B	April 22, 1985	N/A	000	N/A
JP 52148016 A	December 8, 1977	N/A	000	N/A
NL 7705764 A	December 5, 1977	N/A	000	N/A

INT-CL\_(IPC): C07C051/42; C07C055/14

ABSTRACTED-PUB-NO: BE 855237A

BASIC-ABSTRACT: Adipic acid, obtd. by HNO<sub>3</sub> oxidn. of cyclohexane, is purified by 2 treatments. One treatment is conducted using HNO<sub>3</sub> in presence of an oxidn. catalyst and the other uses activated C. Concn. of acid for treatment with catalyst is 40-65 wt.%, temp. used being 100-140 degrees C (pref. 110-130 degrees C). Catalysts in amt. 0.1-1.0 wt.% on adipic acid (pref. 0.2-0.8) include soluble salts of V and Cu (pref. NH<sub>4</sub> vanadate). Other treatment uses 25-40 wt. % aq. soln. or adipic acid and activated C in amt. 0.5-2 wt. % of adipic acid.

Process gives improved colour and a UV index which meets necessary standards for polyamide synthesis for synthetic fibre mfr.

TITLE-TERMS:

PURIFICATION ADIPIC ACID NITRIC ACID TREAT PRESENCE OXIDATION  
CATALYST ACTIVE  
CARBON TREAT

DERWENT-ACC-NO: 1973-51168U  
DERWENT-WEEK: 197336  
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TITLE: Enhanced purity adipic acid prodn

PATENT-ASSIGNEE: KAND[KAND], KANTO DENKA KOGYO KK[KAND]

PRIORITY-DATA: 1971JP-0051894 (July 13, 1971)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 48018219 A		N/A	000	N/A
JP 81006975 B	February 14, 1981	N/A	000	N/A

INT-CL\_(IPC): C07C051/31; C07C055/14

ABSTRACTED-PUB-NO: JP48018219A

BASIC-ABSTRACT: The quality of adipic acid (I) prepd. by HNO<sub>3</sub> oxidn. of cyclohexanol (II)-cyclohexanone (III) mixt. was improved by addn. of hydrogen peroxide. Thus, 12 kg. 30% H<sub>2</sub>O<sub>2</sub> was added at 79 degrees to the reaction mixt. of (II) 150, (III) 176, and 56% HNO<sub>3</sub> 2200 kg. (which contained 20% I) and cooled to ppte. 410 kg. I with purity 99.8%.

TITLE-TERMS:

ENHANCE PURE ADIPIC ACID PRODUCE

DERWENT-ACC-NO: 1971-07345S  
DERWENT-WEEK: 197104  
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TITLE: Adipic acid purification

PATENT-ASSIGNEE: TOA GOSEI CHEM IND LTD[TOAG]

PRIORITY-DATA: 1967JP-0072571 (November 13, 1967)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 71002802 B		N/A	000	N/A

ABSTRACTED-PUB-NO: JP71002802B

BASIC-ABSTRACT: Purification of adipic acid obtained by molecular oxygen oxidation of cyclohexane, cyclohexanol or cyclohexanone, or a mixture thereof, in a solvent system mainly consisting of water, comprises blowing a molecular oxygen contg. gas, pref. air, into the aq. soln. of adipic acid or positively contacting it with the gas in an apparatus such as a packed tower having vapour-liquid contacting surface, and then treating with a strongly acidic cation exchange resin. Purification is achieved when the positive contact of the aq. soln. of adipic acid with the air is carried out at normal temp. but the solubility of adipic acid in water is small and thus temp. of  $\geq 50$  degrees C. is pref.

TITLE-TERMS:

ADIPIC ACID PURIFICATION

DERWENT-ACC-NO: 1973-31683U  
DERWENT-WEEK: 197322  
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TITLE: Adipic acid purification - by contact with ozone contg gas and crystallisation

PATENT-ASSIGNEE: UBE IND LTD[UBEI]

PRIORITY-DATA: 1969JP-0078626 (October 3, 1969)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 73016902 B		N/A	000	N/A

INT-CL\_(IPC): C07C051/42; C07C055/14

ABSTRACTED-PUB-NO: JP73016902B

BASIC-ABSTRACT: Adipic acid isolated from a reaction solution obtained by a liquid-phase oxidation of cyclohexanone with an oxygen-contg. gas is dissolved in water and the soln. contacted with an ozone-contg. gas and crystallizing adipic acid from the solution.

Coloured impurities are effectively removed. Prefd. ozone concn. is 0.3-2.5% (v/v). It is preferred to contact the ozone air with a 20-40% (w/w) aqs. soln. of adipic acid at 70-90 degrees C.

TITLE-TERMS:

ADIPIC ACID PURIFICATION CONTACT OZONE CONTAIN GAS CRYSTAL

DERWENT-ACC-NO: 1980-24322C  
DERWENT-WEEK: 198014  
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TITLE: Recovery of high purity adipic acid - by washing in oil, cyclohexanone or cyclohexane before oxidn. with nitric acid, washing, treating with active carbon and recrystallising

PATENT-ASSIGNEE: SUMITOMO CHEM CO LTD[SUMO]

PRIORITY-DATA: 1978JP-0097739 (August 9, 1978)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 55024153 A	February 21, 1980	N/A	000	N/A

INT-CL\_(IPC): C07C051/48; C07C055/14

ABSTRACTED-PUB-NO: JP55024153A

BASIC-ABSTRACT: Method is claimed of obtaining refined adipic acid by oxidising a crude adipic acid with nitric acid, washing with water, treatment with activated carbon and recrystallisation, the crude adipic acid being obtained from an aq. solution contg. an organic acid, the aq. solution being obtained as by-product in the prepn. of cyclohexanone and cyclohexanol by subjecting cyclohexane to oxidation in a liquid phase with a gas containing oxygen. The novelty is that, prior to oxidising the crude adipic acid with nitric acid, the crude adipic acid is treated with  $\geq 1$  species of LB oil, cyclohexanone or cyclohexanol as the washing liquid.

Adipic acid of higher purity than synthetic adipic acid can be obtained.